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Midwest Dairy Day Focuses on Genomics 101: Putting Genomics to Work

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Midwest Dairy Day Focuses on Genomics 101: Putting Genomics to Work

A.S. Leaflet R3090

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Summary and Implications

The Midwest Dairy School provides a one day learning opportunity for producers, industry, and potentially new dairy producers to network and engage in a current topic. With support from the dairy industry and business community, Iowa State University Extension and Outreach, Northeast Iowa Community College, and Northeast Iowa Dairy Foundation, this program has continued to provide valuable information.

Introduction

The Midwest Dairy School is held every year in late fall and takes place at the Northeast Iowa Dairy Foundation near NICC Campus in Calmar, IA. A current topic related to the dairy industry is offered every year based on producer and industry input. The school runs from 10 AM – 3 PM and draws participants from Iowa, Minnesota, and Wisconsin. In 2015, 58 participants attended as well as 2 presenters and 5 panelists.

Materials and Methods

Improvement of dairy herd genetics can affect herd health, longevity, reproductive traits and many other vital aspects of dairy cattle production. It can also lead to increased milk production, milk quality and overall animal performance. Over the past few years, the integration of dense genomic information into statistical tools used to make selection decisions, commonly referred to as genomic selection, has enabled gains in predicting accuracy of breeding values for young animals. The possibility to select animals at an early stage allows defining new breeding strategies aimed at boosting genetic progress while reducing costs.

Dan Weigel, Director of Outcomes Research with Zoetis shared his knowledge of genomics from calf to cow. Using current data from the Northeast Iowa Dairy Foundation dairy farm, Dan was able to explain how genomics works and how to interpret the data. Carla Stetzer, Regional Program Specialist with Accelerated Genetics, discussed with the audience how genomics can work in various herd situations, the process for starting to use genomics, and costs associated with the program.

The program was enhanced by a panel of five successful dairy producers who shared their experiences of how they use genomics to the participants and helped answer questions of those participating.

Results and Discussion

Overall the participants and presenters felt that the event was useful. There was an increase in knowledge with each presentation. There was an increase of knowledge by 153% in “Calf to Cow”, 127% in “Applying Genomics in Your Herd”, and 156% increase with “Dairy Producer Panel”.

Participants walked away from the program with thoughts and ideas to implement in their situation. As an industry participant, they learned how this technology is impacting the industry and research based talking points they can use with producers that may be interested in genomics. Producers gained a better understanding of the technology, how to evaluate and apply the technology to their farm, and learned more ways to look at the genomic information. Participants will use the information to incorporate into a classroom for teaching purposes, possible implementation of the technology in their herd, and many now will develop a plan for using genomics in their herd using the information learned.

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